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# **Touch Stories: Re-engaging with the intimacy of materials through touch**

## **1. INTRODUCTION**

In today's retail led world consumers are suffocating through an excess of soulless products. It is time we paused to breathe.

*"Touch has a memory"* -John Keats. [1]

It is often assumed that product designers, especially in the fashion industry, will have a deep understanding of the tactile properties of materials that they use. This tacit knowledge is also assumed to be an essential ingredient for intimate engagement with the materials. As will be described in section 3.1 below, touch is about direct contact, close and personal; it is not sensation at a distance in the way of sound and vision. Through this intimacy, the designer can fully understand the potential sensory impact on their customers and can share their knowledge of this intimacy with the customers.

However the rise of fast, offshore manufacture has led to a virtual design approach where cad-cam rules and the first direct contact that the designer has with their material is often when they receive the finished goods. The approach has become embedded in teaching, where virtual-oriented design is cheap and simple as well as effective.

In June 2010 we presented our first thoughts towards a return to intimacy with materials at the annual Northumbria design conference 'Reveal' [2]. After formal presentations, we opened discussion to audience debate.

Niki Taylor [3] a contemporary fashion designer openly described her design experiences in relation to touch. Niki forcefully highlighted that her design process would not be possible without tactile experiences and knowledge accumulated from that intimate process. We were able to summarise the debate and the result was the start of the Touch Stories journey reported here.

The work described is our first experiment in this touch context, and engages a fashion student community of young business and design professionals as our research engine. In recognition of our multidisciplinary ambition, we report in the style of a science experiment - which also reflects the background of the second author.

## **2. TOUCH - THE DESIGN CONTEXT**

We are moving into a period of major social, economic and cultural issues driven in particular by the quest for sustainable lifestyles for a still growing and developing global population. In this period design could and hopefully will play a key role in transforming the way we think.

The design creative process can be defined as the production of aesthetically pleasing, yet functional products. Traditionally this would have involved designing first by sketching, then prototyping, manually moulding the materials in a form.

However much of the design process has now been replaced by Computer Aided Design and virtual prototyping which is then applied and turned into product through offshore manufacture. This means that designers, and most importantly design entrepreneurs are missing out on the intimate experience of interaction with materials that adds both tactile experience and human emotion.

This intimacy and the value it encapsulates is thus not being passed onto the consumer through retail experience or in the end product. The result is too many bland lifeless products being marketed purely on cost.

Thus is fuelled what Black [4] describes as "The Fashion Paradox", i.e. the tension between an industry which has become dependent on the overconsumption of the consumer society made possible by low cost design and manufacture processes with emerging imperatives of environmental and ethical issues. It has become easy to make and sell a lot of goods, but perhaps a new approach to adding value is needed before we drown in an ocean of stuff.

We hypothesise that a business strategy to introduce a new intimacy with materials to consumers through goods and experiences that celebrate "the joy of touch" will a) spawn better, higher value goods with cutting-edge appeal and b) provide a positive piece in the jigsaw necessary to address the Fashion Paradox, taking the line described by Fletcher and Early in "5-Ways" [5,6] that touch is relevant to the production of "supersatisfiers...which begin to break the chain of consumption and dissatisfaction".

This Touch theme can, we believe, help shape concept and technical research that will influence the way we design, make and retail products. It can also aid human well-being and provide solutions to social problems - in the case of fashion from dress and self-presentation experience through the wearing of clothing for identity, function and comfort.

If we can investigate ways to absorb data through touch that then aids design then the relationship between touch and non-touch in our design experiences becomes greater and sensory information from touch leading to comfort make us feel better in our everyday lives.

We intend to look at whether it would be advisable if digital design were balanced with a more tactile design skills education in the future. Have we allowed design to depend too much on technology to the degree that design entrepreneurs are missing out on developing their own knowledge? They are often briefing designers to design products without considering the sensory aspect to either themselves or the end product. This is occurring both in Industry and in education and is stepwise. Each generation is allowed to move even further away from Sennett's great vision [7] of the path: novice to practitioner and then expert.

As Sennett says,

*'Skill is a trained practice, modern technology is abused when it deprives its users of that repetitive, hands on training.'*

### **3. THE INNER WORKINGS OF TOUCH**

#### **3.1 A matter of Scale**

Science loves scale; from astro to nano, each scalar block of length/distance has its own peculiar properties and appeal

Consider a simple story - Gretel is trying to find Hans.

He's been to town on a shopping expedition, enjoying himself as usual while she has been working away at home and in the office. Now she really needs a break. She is sure he must be on his way home. Even though he's across the valley, over the hill and far away – hey, she can hear his yodel call in the distance...

Suddenly, across the valley Gretel sees movement – a tiny speck on the hillside; she is sure it's him, no one else would wear such a loud jacket.

An hour later, here he is running down the path towards her. Oh my god, what a smell, all that Bier and Leberwurst - she can even taste it!

But finally she forgives him, they meet and have a hug – now touch comes into action and gives depth to the sensory connection that started such a long time and distance ago.

The scale of touch, i.e. the distance from the subject over which it operates, is the smallest of the key external senses. Touch is absolutely close and personal. Touch requires actual physical contact with skin.

#### **3.2 The skin, a sense organ**

The skin does far more than “keep our insides in”. As is well known, it is the largest sense organ that we have. That is to say, it contains sensors, detectors of physical stimuli.

The message from sensors in the skin goes to the spinal cord and brain. This is the role of nerves and there are several types. Some are found connected to all skin, some only in hairy. They differ in the way they detect, e.g. through static sensation or through dynamic/stroking; they differ in the speed in which messages get to the brain – all depending on the properties of fatty sheaths round them.

The research literature of the somesthetic senses - senses that are activated by hot, cold, pressure, pain, itch and are generally grouped together as "touch" - is wide, but can be accessed through Hollins's recent review [8].

The result of this sensing and messaging begins with cognition - the mental acquisition of knowledge, in this case through the sense of touch. From this come rewards, e.g. emotions and ultimately behaviour.

Bringing this link between cognition - reward - emotion - behaviour back into the design arena, consider the following. One of the ways, in which people can feel comfort, stress relief and relaxation, is through touch as it gives rise to pleasant sensations. Indeed, recent research [9] indicates that there are even specific sensors and nerve pathways to pleasure. Perhaps this is the science platform to build on and develop the 5-Ways "Supersatisfiers" alluded to in section 2.

#### **4. A TOUCH POLEMIC**

"Touch" has design potential: through design narrative, experimental design, media design, health and well-being, craft - and all cross-linked by STEM (science, technology, engineering, maths). It can impact and can contribute to world issues, and the design problems we face. Right now we are ignoring our sensory skills, and this is having a detrimental impact on creative practise. The long-term result will be a totally artificial world if we do not utilise 'TOUCH'. The Future is about design that reflects a person, about individual expression; looking for something precious, personal and intellectual. Technology has become such a dominant part of communication that it can stifle creativity. Tactile skills hand and made goods still have a part to play. Touch leads to interaction with the consumer and the environment, if you touch something one records it in a way that virtual or visual design cannot.

Sennett, again in his book the Craftsman, expresses the idea well  
*'who we are arises directly from what our bodies can do'*

#### **5. EXPERIMENTAL**

##### **5.1 Raw Material**

The individuals involved in the project are the "raw material" for Touch Stories - that is to say the student community and the research leaders. For this first experiment, 37 students from a range of professional backgrounds and nationality as outlined below formed the community:

##### Student Profiles

Business management -20

Design - 13

Manufacture – 2

Languages -1

Law -1

Asia - 22  
Americas - 1  
Europe -8  
India 4  
Africa 1  
New Zealand 1

Add to this spread the researchers (authors) and a good mix of discipline and culture is available

#### Researcher Profiles

Fashion Design and management - BM  
Science research - PJS  
Europe - both

#### **5.2 Experimental Method**

There are always many old voices that decry the lack of materials knowledge in the "designers of today", and we do not wish simply to join them. To avoid this yet to achieve new thinking in the territory we need to take a tangential approach that does not get stuck into stuff too early.

Accordingly, we are seeking to apply a method of research and teaching based on storytelling in multidisciplinary teams developed by Smith and Sams [10, 11]. This reflects on the role of designer-storytellers described by Seah [12] and Erikson [13]. Thus, perhaps counter-intuitively, we seek to stimulate conceptual and language-based approaches to a physical effect.

The process described by Smith and Sams

*" grew out of a 4+ year collaboration between an industrial R&D research community and Northumbria University's School of Design.... It is a loosely connected suite of projects.... The freedom ... encouraged thinking beyond conventional design lines.... The ambition was to create non-confrontational entry points for both design and science research teams. These allow a common language to be developed between disciplines to open up new design spaces and opportunities. What emerged ... was that even the most complex of ideas generated by the students were the best resolved and communicated to the audience when time based narrative techniques were applied"*

The current research intention is to interrogate the touch ambition described in the preceding sections through a series of student projects where "one ... leads to another".

The starting point, our first project vehicle, "Touch Stories" was a briefed project run over 2 months. A group of postgraduate students were invited to participate in the research, and the project was not assessed as part of their Masters course. The reward is a learning experience that is part of live research.

The students were asked to research and communicate a fashion future classified into a palette that will inspire and teach about the use of Touch. Communication could be in any sort of medium, e.g. words, graphics, music, colour, images, texture and product.

At all stages of the project, the researchers emphasized the valuable role of the students as catalysts, starting a series of journeys that it would be the role of the researchers ultimately to direct into unknown territories for long-term research and outcomes.

Guidance and mentoring was given through the lectures and tutorials. The students gave group research presentations, which included a Business proposal, initial product ideas and created a product design brief, which could be given to designers to develop touch concepts into product.

The project brief is attached in Appendix 1.

Touch Stories builds on earlier design projects "Touch Gourmet" by Torres and Sams [14] that were inspired by the observations of experimental psychologist Charles Spence, e.g. [15], that people have difficulty in detecting and remembering touch, but at least to some extent can be taught touch skills. The key difference is that Torres and Sams sought design outcomes directly, whereas with the current work we are starting a sequential process that uses design-thinking to influence and potentially change the behaviour of the design entrepreneur of the future.

## **6. RESULTS and DISCUSSION**

In general, the multidisciplinary, multinational student community embraced touch as a vehicle to inspire and stimulate our senses that could in principle lead to the creation of touch concepts and new products.

In the first stages of the project, each member of the community was asked to develop a personal idea. Using these initial thoughts for guidance, the researchers split the community into groups of maximum four people based around contrast, avoiding placement of too many like-minded thinkers together. While this at first created some doubt and confusion as to how all their ideas could work together, a series of brainstorming sessions amongst started to produce excellent results. The moment the students realised that it was a question of taking the essence of their own ideas and not enforcing them too literally then the barrier was broken and progress in new group ideas was rapid. The results gave a platform for the groups on which to verbalise and visualise the ideas and so ultimately create new positive associations leading to product ranges and services with touch sensations. So from temperature, pressure; pain; itch came grip, illusion. association and play.

Territories entered include a touch playground, touch museum, stress free clothing, sweat dream products, touch soft products [marshmallow inspired] touch luxury bespoke service, tender touch stress relief and a touch

mechanical framework.

The output could be grouped as follows:

Retail experience themes - 3  
Retail analysis methods and tools - 2  
Product families - 3  
Technology-based products – 2

The more conceptual and - from the researchers point of view - interesting outcomes tended to be in the experience and analysis territories. These are the outcomes that are very open-ended, and look like signposts into further work.

For example, a concept for a retail analysis tool was presented as a store for a set of emotions generated through touch and defined through body responses like temperature, heart rate and similar (or as yet unknown!) metrics. Through this it would be possible to gain consumer knowledge, as these would be activated when the consumer touches a specifically designed product. This could be taken further to providing sensory attraction to products through materials.

An observation during the project was that the concept base really started to broaden when business-orientated students began to see the benefits of creative thinking assisting entrepreneurial potential. They then worked with the design creative's in the group to provide results that were interesting and advanced.

Thus from a starting point of the single word " touch" the project showed how a diverse group of designers and non-designers had inspired themselves and each other to create a series a fresh concepts which could then be taken up by a design team and lead to a better product and environment. It had stimulated thought management while contributing to concepts that could also aid health and well being.

## **7. FUTURE DIRECTIONS**

An immediate follow-up project will invite further individual developments to grow from 3 chosen Touch Story concepts.

For example, we will invite exploration of use of the retail analysis tool as part of a design brief to design a sustainable set of packaging based on touch. Will the end result be of a significantly progressive from a design perspective than without this input into the process?

We also intend to use Touch Stories as a non-threatening vehicle to engage with wider academic and industry community into the intimacy of materials debate.



We are at the very start of a journey which we intend to take well beyond fashion (for the challenge of new materials and "too much stuff" spreads well beyond Fashion and its Paradox), thus to stretch and develop the territory, through the processes described in [10] and [11]. It's a journey the design world needs to 'touch on'.

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## **9. APPENDIX - Touch Stories Project Brief**

### **9.1 Background**

The sense "touch" is a theme for research at Northumbria University Within fashion, craftsmanship and make. The theme seeks stimuli to help shape concept and technical research that will influence the way we design, make and retail products. The project is designed to re-engage the fashion industry to the intimacy of materials through touch and emotion.

The project vision is to capture and communicate the visual sense world through concepts that mixes sensory, tactile experiences and garments. To get there, the students are asked to create their new fashion palette of ideas and stimuli, then classify them into areas like flexibility, invisibility, sound, non-touch, sensory and distance.

### **9.2 The brief**

Touch is for a new design world where the sense "Touch" is the essential fashion heart of design emotion, tactile sensibility and intrigue and sustainability through fashion. The concept explores valuing clothes for longer, a sense of re-engagement. New materials, feelings, precious. memories, senses and touch, pre-conception are all words to consider.

1. Research and communicate a fashion future classified into a palette that will inspire us and teach us about the use of Touch. Communication could be in any sort of medium, e.g. words, graphics, music, colour, images, texture and product.

Input: Initial lectures on touch by BM and PS, briefing talk.

Output: Verbal ideas and concepts, mood board/presentation.

Decision: go/no go to phase 2

2. Bring selected themes to professional level for a presentation where the ideas communicate the new touch-centered world.

Input: Group tutorial interventions from BM and PS, plus self-analysis.

Output present in small groups a seminar on new touch concepts.

## **10. ABSTRACT**

In today's retail led world consumers are suffocating through an excess of soulless products. It is time we paused to breathe.

"Touch has a memory" - John Keats. [A1]

It is often assumed that product designers, especially in the fashion industry, will have a deep understanding of the tactile properties of materials that they use. This tacit knowledge is also assumed to be an essential ingredient for intimate engagement with the materials, for touch is about direct contact,

close and personal; it is not sensation at a distance in the way of sound and vision. Through this intimacy, the designer can fully understand the potential sensory impact on their customers and can share their knowledge of this intimacy with the customers.

However the rise of fast, offshore manufacture has led to a virtual design approach where cad-cam rules and the first direct contact that the designer has with their material is often when they receive the finished goods. The approach has become embedded in teaching, where virtual-oriented design is cheap and simple as well as effective.

This runs in parallel to what Black [A2] describes as "The Fashion Paradox", i.e. the tension between an industry which has become dependent on the overconsumption of the consumer society made possible by low cost design and manufacture processes with emerging imperatives of environmental and ethical issues. It has become easy to make and sell a lot of goods, but perhaps a new approach is needed before we drown in an ocean of stuff.

We hypothesise that a business strategy to introduce a new intimacy with materials to consumers through goods and experiences that celebrate "the joy of touch" will a) spawn better, higher value goods with cutting-edge appeal and b) provide a positive piece in the jigsaw necessary to address the Fashion Paradox, taking the line described by Fletcher and Early in "5-Ways" [A3, A4] that touch is relevant to the production of "supersatisfiers...which begin to break the chain of consumption and dissatisfaction".

There are always many old voices that decry the lack of materials knowledge in the "designers of today", and we do not wish simply to join them. To avoid this yet to achieve new thinking in the territory we take a tangential approach that does not get stuck into stuff too early.

Accordingly, the method will apply a method of research and teaching based on storytelling in multidisciplinary teams developed by Smith and Sams [A5, A6]. This reflects on the role of designer-storytellers described by Seah [A7] and Erikson [A8]. Thus, perhaps counter-intuitively, we seek to stimulate word-based approaches to a physical effect.

The resultant project vehicle "Touch Stories" is inspired by the observations of experimental psychologist Charles Spence, e.g. [A9], that people have difficulty in detecting and remembering touch, but can be taught touch skills. This builds on earlier design projects "Touch Gourmet" by Torres and Sams [A10]. We provide below a short summary of the science context as well as the more usual design context for the project.

The work described here is our first experiment using this method in the touch context with a fashion student community of young business and design professionals. In recognition, we report in the style of a science experiment - which also reflects the background of the second author.

We are at the very start of a journey which we intend to take well beyond

fashion (for the challenge of new materials and "too much stuff" spreads well beyond Fashion and its Paradox), thus to stretch and develop the territory, through the processes described in [A5, A6]. It's a journey the design world needs to 'touch on'.

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